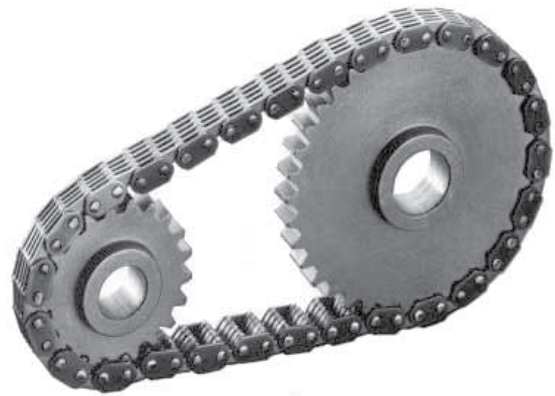


SC03 - 3/16" Pitch Round Pin Inverted Tooth Chains



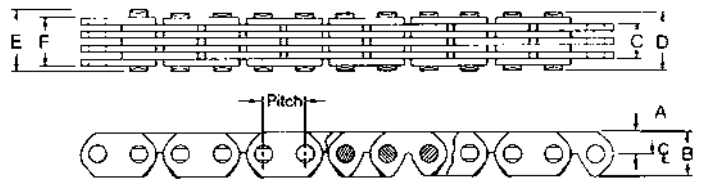
The 3/16" pitch 'SC' chains use a simple round pin construction for maximum strength and durability. Chains are available in both centre guide and single outside guide constructions in all widths, but it is normal for narrow width chains to be outside guide. The chains articulate fully on the pin, and as such tensioners can be used on the back of the chain; also the chains can be built with sets of teeth opposed to one another for serpentine drives. Tiny drives can be achieved with these chains, with power capacity up to 4 kW, and operating speeds to 10,000 rpm. All 3/16" pitch inverted tooth chain sprockets are manufactured to customer requirements, normally manufactured from induction hardened steel. Complete chain drive design and fabrication is available to meet your individual requirements. A range of Stainless Steel chains is also available for use in Food Process and Handling Machinery. These chains are manufactured from hardened, corrosion resistant, 304 grade Stainless Steel.



Chain lengths must be of even number of pitches, as offset links are not available with these series of chains.

Typical Applications

- Check Weighers - used to convey product over scales
- Postage Machinery - high operating speeds possible
- Copying Machines - transmit high loads in confined space
- Aircraft Controls - Accurate transfer of motion
- Machine Tools - Compact high torque drives
- Conveyors - handling hot small components



Chain Dimensions - 3/16" SC Series Chains

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width between Guide Links C mm	Width over Links F mm	Width over Rivet Pin D mm	Width over Conn Pins E mm	Average U.T.S. kN	Ave. Weight per Metre kg
R0305	5/32				CG		4.0	5.1	6.3	2.22	0.1
SC0305	5/32				SOG	2.4	4.0	5.1	6.3	2.22	0.1
R0307	7/32				CG		5.6	6.7	7.9	3.34	0.2
SC0307	7/32				SOG	4.0	5.6	6.7	7.9	3.34	0.2
R0309	9/32				CG		7.1	8.2	9.4	4.45	0.2
SC0309	9/32				SOG	5.6	7.1	8.2	9.4	4.45	0.2
R0311	11/32	3/16"	2.4	5.1	CG		8.7	9.8	11.0	5.56	0.2
SC0311	11/32	(4.76)			SOG	7.1	8.7	9.8	11.0	5.56	0.2
SC0315	15/32				SOG	10.3	11.9	13.0	14.2	7.78	0.3
R0315	15/32				CG		11.9	13.0	14.2	7.78	0.3
SC0319	19/32				CG		15.1	16.2	17.4	10.00	0.4
R0319	19/32				SOG	13.5	15.1	16.2	17.4	10.00	0.4
SC0325	25/32				CG		19.8	20.9	22.1	13.35	0.5
R0325	25/32				SOG	18.3	19.8	20.9	22.1	13.35	0.5
SC0331	31/32				CG		24.6	25.7	26.9	16.70	0.6
R0331	31/32				SOG	23.0	24.6	25.7	26.9	16.70	0.6

Standard Chains are in bold typeface

Chain Dimensions - 3/16" SC Series Stainless Steel Chains

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width between Guide Links C mm	Width over Links F mm	Width over Rivet Pin D mm	Width over Conn Pins E mm	Average U.T.S. kN	Ave. Weight per Metre kg
SC0305SS	5/32				SOG	2.4	4.0	5.1	6.3	2.00	0.1
SC0307SS	7/32				SOG	4.0	5.6	6.7	7.9	3.34	0.2
SC0309SS	9/32				SOG	5.6	7.1	8.2	9.4	4.45	0.2
SC0311SS	11/32				SOG	7.1	8.7	9.8	11.0	5.56	0.2
SC0315SS	15/32	3/16"	2.4	5.1	SOG	10.3	11.9	13.0	14.2	7.78	0.3
R0315SS	15/32	(4.76)			CG		11.9	13.0	14.2	7.78	0.3
SC0319SS	19/32				CG		15.1	16.2	17.4	10.00	0.4
R0319SS	19/32				SOG	13.5	15.1	16.2	17.4	10.00	0.4
SC0325SS	25/32				CG		19.8	20.9	22.1	13.35	0.5
R0325SS	25/32				SOG	18.3	19.8	20.9	22.1	13.35	0.5
SC0331SS	31/32				CG		24.6	25.7	26.9	16.70	0.6
R0331SS	31/32				SOG	23.0	24.6	25.7	26.9	16.70	0.6

American Standard SC Series Inverted Tooth Chains



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Cross+Morse 'SC' Series Inverted Tooth chains are manufactured to meet the American Standards ASME(ANSI) B29.2, and will operate on Sprockets manufactured to that Standard. Chains of other manufacture, often identified with letters 'SC' stamped on the outer plates, can be replaced, but only as complete chains, because the ASME Standard allows manufacturers individual design within the concept, so although all chains will operate on the standard sprockets, chains from different manufacturers will not usually connect together. All Cross+Morse chains use the Pin and Rocker design developed in the 'HV' series chains, so eliminating friction and chordal action during articulation allowing the chains to me operated at speeds up to 35 metres/sec, with negligible wear or heat generation. Improved Link design combined with the 'HV' type pins has enabled higher loads to be transmitted, with the chains having twice the power capacity specified in the Standard. The improved Link design reduces stress concentrations giving improved fatigue life and increased tensile strength. Innovative stamping methods in link production maximise the bearing surface area of each link, reducing stress in the chain joint, and chain elongation when operating. All chain links are shot peened to improve fatigue resistance and provide a uniform finish.

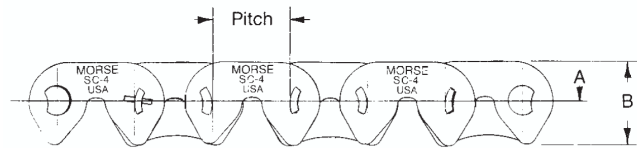
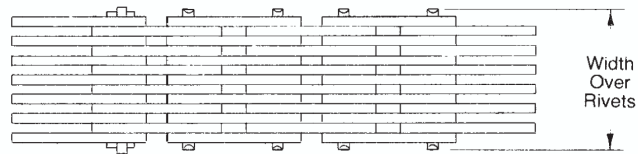
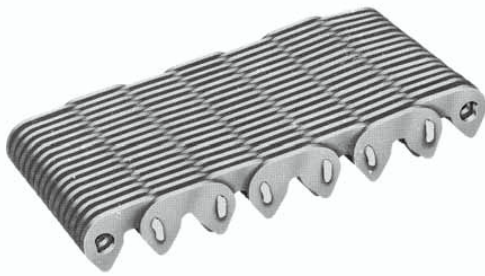
The new series 'SC' chains suffer minimal wear elongation during operation, making them well suited to 'fixed centre' drive applications. The chains can also be used to replace other manufacturers chains on existing applications to increase power ratings.

The 'SC' chains are available in standard Centre Guide construction, as shown in the following table; or with either Single or Double Outside Guides, as shown in tables on pages 87/88. Other widths and guiding arrangements from the standards shown can be supplied as replacements on existing drives on short lead time.

Our Standard 'SC' Chains are not suitable for Conveying applications, due to the curved back of the links. We are also able to offer an earlier series of chains, which do have flat back surface, to fit SC Sprockets. This 'Original Series SC Chain' is available to order on chains up to 1" pitch. Round Pin chain is also available to request in 3/8" to 3/4" pitch, for applications requiring to run on small sprockets, or subject to back-bending in operation.

It is desirable on all Inverted Tooth Chain drives to design installations so that chains have an even number of pitches, but on 'SC' if this is not possible we can provide Offset (Hunting) Link sets to accommodate odd pitch length chains. Chains will normally be supplied in requested length complete with Cotter Pin Joining Pin, but can also be supplied rivetted endless if required.

3/8" through to 2" Pitch



Chain Dimensions - SC Series Centre Guide Chains Imperial Widths

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width over Links F mm	Width over Rivet Pin D mm	Width over Drilled Pins E mm	Average U.T.S kN	Ave. Weight per Metre kg
R302†	1/2	3/8" (9.525)	5.6	10.7	CG	14.3	16.3	17.8	17	0.7
SC303	3/4				CG	20.6	22.6	24.0	25	1.0
SC304	1				CG	27.0	29.0	30.5	33	1.3
SC305	1.1/4				CG	33.4	35.3	36.8	42	1.6
SC306	1.1/2				CG	39.8	41.7	43.2	50	1.9
SC307	1.3/4				CG	46.2	48.1	49.6	67	2.2
SC308	2				CG	52.5	54.4	55.9	75	2.5
SC310	2.1/2				CG	65.3	67.2	68.8	83	3.1
SC312	3				CG	78.1	80.0	81.5	100	3.7
SC316	4				DCG*	103.6	105.6	107.2	133	4.9
SC403	3/4	1/2" (12.70)	7.6	14.2	CG	20.6	23.6	25.4	33	1.3
SC404	1				CG	27.0	30.0	32.0	44	1.7
SC405	1.1/4				CG	33.4	36.3	38.1	56	2.1
SC406	1.1/2				CG	39.8	42.7	44.5	67	2.5
SC407	1.3/4				CG	46.2	49.0	51.0	78	2.9
SC408	2				CG	52.5	55.4	57.2	89	3.3
SC410	2.1/2				CG	65.3	68.1	70.1	111	4.1
SC412	3				CG	78.1	80.9	82.8	133	4.9
SC414	3.1/2				CG	90.8	93.7	95.5	156	5.7
SC416	4				DCG*	103.6	106.4	108.2	178	6.5
SC420	5	DCG*	129.1	132.1	133.9	222	8.1			
SC424	6	DCG*	154.6	157.5	159.3	267	9.7			
SC428	7	DCG*	180.1	183.0	185.0	356	11.3			

* The Guide Spacing on Double Centre Guide Chains varies by manufacturer, it is thus necessary to provide this dimension when ordering. The dimension can be taken from either the chain to be replaced, or the sprockets, and should be from centre to centre of link or groove.

†SC302 Chain is a Single Side Guide construction chain, see page 87.

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American Standard SC Series Inverted Tooth Chains



Chain Dimensions - SC Series Centre Guide Chains Imperial Widths

'SC' Chain Designation	Nominal Width Inches	Chain Pitch ins(mm)	Chain Ht. over Spkt. PCD A mm	Chain Height B mm	Guide Type	Width over Links F mm	Width over Rivet Pin D mm	Width over Drilled Pins E mm	Average U.T.S kN	Ave. Weight per Metre kg
SC504	1				CG	26.8	33.0	35.0	56	2.5
SC506	1.1/2				CG	39.2	45.3	47.4	83	3.5
SC508	2				CG	51.7	57.7	59.8	111	4.6
SC510	2.1/2	5/8"	9.5	17.8	CG	64.1	70.1	72.1	139	5.6
SC512	3	(15.88)			CG	76.5	82.6	84.6	167	6.7
SC514	3.1/2				CG	88.9	94.7	96.8	195	7.8
SC516	4				CG	101.3	107.2	109.2	222	8.8
SC520	5				CG	126.2	132.0	134.0	278	10.9
SC524	6				CG	151.0	157.0	159.0	334	13.0
SC604	1				CG	26.8	33.6	35.6	67	3.0
SC606	1.1/2				CG	39.2	46.2	48.3	100	4.2
SC608	2				CG	51.7	58.4	60.5	133	5.5
SC610	2.1/2				CG	64.1	71.1	73.2	167	6.8
SC612	3	3/4"	10.9	21.3	CG	76.5	83.4	85.4	200	8.0
SC614	3.1/2	(19.05)			CG	88.9	95.7	97.7	233	9.3
SC616	4				CG	101.3	108.2	110.2	267	10.6
SC620	5				CG	126.2	133.1	135.2	334	13.1
SC624	6				CG	151.0	158.0	160.0	400	15.6
SC628	7				CG	175.9	182.8	184.9	467	18.2
SC632	8				CG	200.7	207.7	209.7	534	20.7
SC806	1.1/2				CG	34.7	44.0	46.8	133	4.9
SC808	2				CG	47.4	57.4	60.2	178	6.5
SC810	2.1/2				CG	60.1	69.7	72.5	222	8.0
SC812	3				CG	72.8	81.0	85.1	267	9.6
SC816	4				CG	98.2	107.4	110.2	356	12.7
SC820	5				CG	123.6	131.6	134.4	445	15.8
SC824	6	1"	15.2	28.4	CG	149.0	156.0	159.8	534	18.9
SC828	7	(25.40)			CG	174.4	188.7	191.5	623	22.0
SC832	8				CG	199.8	213.6	216.4	712	25.1
SC840	10				CG	250.6	263.7	266.4	890	31.3
SC848	12				CG	307.8	316.0	319.0	1068	37.5
SC1212	3				CG	72.9	84.3	84.3	400	14.0
SC1216	4				CG	98.4	108.7	108.7	534	18.6
SC1220	5				CG	123.8	134.1	134.1	667	23.1
SC1224	6				CG	149.3	159.5	159.5	801	27.7
SC1228	7	1/1/2"	22.8	42.7	CG	174.7	184.9	184.9	934	32.2
SC1232	8	(38.10)			CG	200.1	210.6	210.6	1068	36.7
SC1236	9				CG	225.6	236.5	236.5	1201	41.3
SC1240	10				CG	254.2	264.7	264.7	1334	45.8
SC1616	4				CG	98.2	110.2	110.2	712	24.7
SC1620	5				CG	123.6	135.6	135.6	890	30.8
SC1624	6				CG	149.0	161.0	161.0	1068	36.8
SC1628	7	2"	30.4	57.0	CG	174.4	186.4	186.4	1246	42.9
SC1632	8	(50.80)			DCG*	199.8	211.8	211.8	1423	48.9
SC1640	10				DCG*	250.6	262.6	262.6	1779	61.1
SC1648	12				DCG*	301.4	313.4	313.4	2135	73.2
SC1656	14				DCG*	358.6	370.6	370.6	2491	85.3
SC1664	16				DCG*	409.4	421.4	421.4	2847	97.4

* The Guide Spacing on Double Centre Guide Chains varies by manufacturer, it is thus necessary to provide this dimension when ordering. The dimension can be taken from either the chain to be replaced, or the sprockets, and should be from centre to centre of link or groove

For Installation and Lubrication information refer to HV data on page 83. For any further Technical information contact our Technical Sales Dept. at Birmingham.

Order Information

If chain part number not available when ordering replacement chain, the following information should be supplied.

- | | |
|--|--|
| 1. Chain Pitch Distance between centres of Teeth Tips when chain laid flat. | 4. Inside Width Outside guide chains only, distance between guides. |
| 2. Chain Width Distance over Link Plates. | 5. Pin Length Length of rivet and connecting pins, if clearance critical. |
| 3. Guiding Centre or Outside Guide. | 6. No. Pitches No. pitches of chain which make closed chain. |

If the chain you require to replace is not shown above, or you require assistance in identification or drive design, contact our Technical Sales Dept.